APPENDIX D: Instructional Strategies

Figure 44

STRATEGIES FOR STUDENTS WITH DIVERSE TALENTS

Intelligence	Students learn best by:	Planning questions for teachers	Learning activities	
Linguistic ABCDEFGHUKLM dog Cat	Verbalizing, hearing, and seeing words	How can I use the spoken or written word?	Creative writing Formal speech Humor or telling jokes Impromptu speaking Journal or diary keeping Oral debate Poetry Storytelling Words—used in reading, writing, speaking	
Logical-Mathematical	Logical-Mathematical Conceptualizing it, quantifying it, thinking critically about it		Abstract symbols, formulas Calculation Counting Deciphering codes Finding patterns Forcing relationships Graphic organizers Number sequences Outlining Problem solving Syllogisms	
Spatial	Drawing it, sketching it, visualizing it	How can I use visual aids, visualization, color, art, or metaphor?	Active imagination Color schemes Designs and patterns Drawing guided imagery Mind mapping Painting pictures Pretending Sculpture/models	
Bodily-Kinesthetic	Dancing it, building a model of it, doing a hands-on activity related to it	How can I involve the whole body or use hands-on experience?	Body language Dancing—folk or creative Drama/acting Inventing Martial arts Mime Physical gestures Physical exercises Playing sports and games Role-playing	

Figure 44 (continued)

STRATEGIES FOR STUDENTS WITH DIVERSE TALENTS

Intelligence	Students learn best by:	Planning questions for teachers	Learning activities
Musical	Singing it, chanting it, finding music that illus- trates it, putting on back- ground music while learn- ing it	How can I bring in music or environmental sounds, or set key points in a rhythmic or melodic frame- work?	Creating music Environment sounds Humming Listening to music Music performance Music composition,creation Percussion vibrations Rhythmic patterns Singing Tonal patterns Vocal sounds and tones
Interpersonal	Working on it with another person or group of people	How can I engage students in peer-sharing, coopera- tive learning, or large- group simulation?	Collaboration skills Cooperating Cooperative learning Empathy practices Giving Feedback Group projects Intuiting others' feelings Listening Person-to-person communication Receiving feedback Sensing others' motives Talking to others Teamwork/division of labor
Intrapersonal	Relating it to a personal feeling or inner experience	How can I evoke personal feelings or memories, or give students choices?	Being alone Complex guided imagery "Centering" practices Emotional processing Focusing/concentration skills Higher-order reasoning "Know thyself" practices Metacognition techniques Mindfulness practices Silent reflection methods Telling about feelings Telling about thinking Thinking strategies
Naturalist-Physical World	Observing it, classifying it, appreciating it	How can I relate the student's learning to the physical world?	Discovering, uncovering Observing, watching Forecasting, predicting Planting Comparing Displaying Sorting and classifying Photographing Building environments

STRATEGIES FOR STUDENTS WITH DIVERSE TALENTS Multiple Intelligences Grid of Ideas

MULTIPLE INTELLIGENCES GRID OF IDEAS The Olympic Games or Games of Life							
Verbal	Logical	Spatial	Bodily	Musical	Interpersonal	Intrapersonal	Naturalist
Biographies	Graphic arts	Greek architecture	Fitness	National songs	Teamwork	Individual achievement	Nutrition
Writing about heroes	Biochemistry	Pottery	Sports	Raps	Cooperation	Pride	Health
Historical fiction	Laws of physics	Painting	Practice	Practicing music	Competition	Sense of accomplishment	Wellness
Myths	Statistics	Posters	Routines	Relaxation music	Sportsman- ship	Logs	Biochemistry
Literature	Percentages	Photos	Regimens	Meditation	Coaching	Journals	Climate
News reporting	Logical thinking	Graphic organizers	Physical therapy	Composing	Mentoring	Psychology of peak performance	Culture
Expository writing	Sequences	Graphs	Conditioning	Performing	Global relationships		Biofeedback
Features	Cause/effect	Visualization techniques	Experiences	Selecting appropriate music	Conflict management	Endurance	Attitudes

STRATEGIES FOR STUDENTS WITH DIVERSE TALENTS Planning Model Using Bloom's Taxonomy

Bloom's Taxonomy is a model that focuses on six levels of thinking. The six levels roughly form a two-tiered arrangement that represents levels of complexity in thinking. Knowledge and comprehension are the lower or more concrete levels of thinking. Analysis, evaluation, and synthesis represent higher or more complex levels of thinking. The application level, which falls between the lower and higher levels, can be very complex depending on the task.

A variety of instructional strategies and products may be catagorized for each level of thinking. Teachers who design a variety of learning activities that require different levels of thinking will provide appropriate opportunity for the diverse number of students whose thinking levels range throughout the spectrum.

Figure 46 provides a model for instructional planning based on Bloom's taxonomy of thinking. Also see Figure 47, World Languages and Bloom's Taxonomy.

Level		Definition	Instructional Strategies	Activities, Tasks, & Products
e concrete levels	Knowledge	Students recall information, recite, or write	 ask • define • describe discover • indentify label • list • listen locate • match • memorize name • observe recite • recognize remember • research select • state • tell 	books • diagrams • events exams • facts in isolation films • film stirps magazine articles • models newspapers • people • plays quiz • radio • recordings/records tapes • text reading • vocabulary workbook pages
Lower, less complex, more concrete levels	Comprehension	Students restate the information in their own words	• ask • change • compare • convert • defend • discover • distinguish • edit • explain • express • extend • generalize • give example • identify • illustrate • infer • interpret • listen • locate • match • observe • paraphrase • predict • relate • research • restate • rewrite • show symbol • summarize • transform • translate	casual relationship comparison of like/unlike items conclusion/implication based on data diagrams films filmstrips graph magazines models newspapers outline own statement people photograph radio response to questions revisions skit speech story summary tape recording television

Figure 46 (continued)

STRATEGIES FOR STUDENTS WITH DIVERSE TALENTS **Planning Model Using Bloom's Taxonomy**

Level		Definition	Instructional Strategies	Activities, Tasks, & Products
Level depends on complexity of task	Application	Students apply the information on one or more contexts.	• apply • build • change • choose • classify • construct • cook • demonstrate • discover • dramatize • experiment • interview • list • manipulate • modify • paint • prepare • produce • record • report • show • sketch • solve • stimulate • teach • use guides, charts, maps	artwork • collection • crafts demonstration • diagram • diorama diary • drama • forecast illustration • list • map • meeting mobile • model • paint photographs • project • puzzle question • recipe • scrapbook sculpture • shifting smoothly from one gear into another • solution stichery
	Analysis	Students understand component parts to be able to compare and contrast or categorize information.	 advertise • analyze categorize • classify • compare contrast • differentiate dissect • distinguish infer • investigate • point out select • separate • solve subdivide • survey 	argument broken down • chart commercial • conclusion • checked diagram • graph • parts of propaganda statement identified • plan prospectus • questionnaire report survey • report • solution survey • syllogism broken down word defined
ore abstract levels	Synthesis	Students judge what they have analyzed and support their opinions.	• combine • compose • construct • create • design • estimate • forecast • hypothesize • imagine • infer • invent • predict • produce • rearrange parts • role-play • write	advertisement • article • book cartoon • experiment • formation of a hypothesis or question • game invention • lesson plan • machine magazine • new game • new product new color, smell, taste • news article pantomine • play • poem puppet show • radio show • recipe report • set of rules, principles, or standards • song • speculate on or plan alternative courses of action • story structure • television show
Higher, more complex, more abstract levels	Evaluation	Students create and/or gather pieces of information to form a novel thought, idea, product, or per- spective.	 appraise • choose • compare consider • criticize • critique debate • decide • discuss editorialize • evaluate give opinion, viewpoint judge prioritize • recommend relate • summarize • support weigh 	conclusion • court trial • critique debate • decision • defense/verdict discussion • editorial • evaluation group discussion • group • letter news item • panel • rating/grades recommendation • self-evaluation standard compared standard established • survey valuing

STRATEGIES FOR STUDENTS WITH DIVERSE TALENTS World Languages and Bloom's Taxonomy

Knowledge/ Comprehension	Application	Analysis	Synthesis	Evaluation
What students will do:	What students will do:	What students will do:	What students will do:	What students will do:
Write telegrams Arrange lines of dialogues Fill out authentic forms for the target country Explain proverbs, slang Listen for sequence Explain the "What? Who? Where? How? Why?" Give description of scenes from a video presentation Describe pictures from the target country Define words Listen and paraphrase in English a conversation heard in the target language Draw picture from verbal information of a target culture's scene or object	Dub cartoons, TV shows Command others step-by-step to prepare a typical cultural dish Produce questions with correct pronunciation Apply a cultural custom to a real-life situation in the target country Interview classmates on their daily activities Plan a menu for occasions typical of the target culture Make shopping lists for various cultural, social events Apply rules of correct cultural protocol while dining in the target country Classify words, poems, authentic materials, genre Apply gestures learned to an authentic situation Apply reading strategies to understand authentic texts	Identify elements of a particular literary form Analyze the lyrics of popular songs to compare both cultures' perspectives Compare points of view found in two editorials Analyze a story, poem, and other authentic materials Analyze a scene in the target culture Find evidence to support opinion Compare students' customs with the target culture's Conduct a survey and analyze the results Analyze the typical foods of the target country for nutritional value Identify the best route to a historic site in the target country Play the role of a tourist who bargains for merchandise in the target country	Write an alternative ending to a story Predict consequences if other historical events would have resulted differently Write titles for a play, story, or article Write headlines in newspaper style on current issues in the target country Predict future events Write a diary of an imaginary trip Extend a story Hypothesize the reaction to different situations based on the cultural beliefs Compose a poem, skit, role-play, advertisement Create hypothetical real-world situations found in the target culture Create an infomercial	 Prioritize solutions to cultural dilemmas Express and justify opinions on creative products of the culture Give and support opinions about issues Evaluate TV shows, movies, cartoons Write an editorial giving and supporting own opinion Express the pros and cons of policies Give and support the decision in a mock trial Write an ambassador with suggestions for the resolution of a real-world problem Justify decisions of sites to visit in the target culture Read an editorial in a target-country newspaper; respond and send response Evaluate best World Wide Web pages for source of current events in the target country

STRATEGIES FOR EXCEPTIONALLY ABLE (GIFTED) STUDENTS **Strategies for Exceptionally Able Students**

To ensure success with exceptionally able students...

- allow for choice within assignments and projects.
- use compacting.
- allow students to make independent plans for independent learning.
- provide mentoring or apprenticeship with professionals.
- teach entrepreneurship.
- use theory of multiple intelligences.
- use tiered assignments which are more complex or abstract.
- use Socratic questioning.
- use critical and creative questioning strategies.

- use open-ended questioning strategies.
- use interdisciplinary units.
- allow in-depth enrichment learning.
- allow time with like-intellectual peers.
- use accelerated pace of instruction.
- allow dual enrollment or early admission opportunities.
- remove time and space restrictions to allow for a long-term integrated plan of study.
- provide more difficult or abstract resources.

- allow for concrete or reallife investigations and explorations.
- teach coping skills.
- allow students to suggest modifications in the content of their learning, the process which they use to learn, and the product they produce to show their learning.
- clearly communicate criteria and parameters to avoid students taking unacceptable risks or creative detours.

STRATEGIES FOR STUDENTS WITH SPECIFIC LEARNING NEEDS

Considerations for Meeting Specific Learning Needs in Skill and Instructional Areas

To ensure success with speaking...

- give sentence starters.
- use graphic organizers to organize ideas and relationships.
- use visuals.
- allow extra response time for processing.
- use cues and prompts to help the student know when to speak.
- use partners.
- phrase questions with choices embedded in them.
- use choral reading or speaking.
- use rhythm or music.
- allow practice opportunities for speaking.
- practice role-playing activities.

To ensure success with assessment...

- use a variety of authentic assessments.
- establish criteria and expectations prior to instruction.
- teach test-taking strategies.
- teach the format of an upcoming test.
- allow adequate time for test taking.
- allow paper-and-pencil tests to be taken in a different space.
- allow a variety of ways to respond, e.g., orally, pictorially, tape recordings.
- give choices.
- assess learning continuously over time, not just at the end of a unit of study.
- use rubrics.
- use self-assessment tools

To ensure success when working in groups...

- teach group rules and expectations.
- teach skills of independence; e.g., bridging phrases, disagreeing agreeably, voice level.
- teach manageable strategies for moving in and out of groups within the classroom setting.
- post rules and expectations.
- give adequate time but not "fooling around" time.
- be in close proximity to groups as they work.
- teach students to self-monitor group progress.
- assign student roles or responsibilities in the group.
- teach a signal for getting attention of all groups.
- practice and assess students' behaviors in small-group settings.
- use cooperative learning strategies.
- use a wide variety of groupings; e.g., flexible, cluster, skill.

Figure 49 (continued)

STRATEGIES FOR STUDENTS WITH SPECIFIC LEARNING NEEDS

Considerations for Meeting Specific Learning Needs in Skill and Instructional Areas

The following suggestions are grouped to address specific kinds of learning needs, but the strategies also may be beneficial to other students in the same classroom.

To ensure success with reading...

- use pre-reading and postreading activities to preteach or reinforce main ideas.
- use before, during, and after reading strategies; e.g., before—preview questions; during—pausing to reflect; after—self-evaluation, summary.
- provide advanced organizers when showing videos.
- use peer tutoring.
- provide audiotaped materials (text or study guides).

- teach self-questioning.
- paraphrase key points and/or have students paraphrase key points.
- summarize key points and/or have students summarize key points.
- label main ideas.
- label 5Ws—Who? What? When? Where? Why?
- allow highlighting of texts, passages, key words, or concepts.
- use visual imagery.

- explain idioms that appear in reading passages.
- allow silent pre-reading.
- allow partner reading
- use computer programs or games.
- allow students to quietly read aloud (subvocalization).
- use graphic organizers.
- use preparatory set, i.e., talk through what a reading passage is about using new vocabulary and concepts.

To ensure success with writing...

- shorten writing assignments.
- require lists instead of sentences.
- dictate ideas to peers.
- provide note takers.
- allow students to use a tape recorder to dictate writing.
- allow visual representation of ideas.
- provide a fill-in-the-blank form for note taking.
- allow students to use a computer for outlining, wordprocessing, spelling, and grammar check.

- provide a structure for the writing.
- allow collaborative writing.
- provide a model of the writing.
- allow use of different writing utensils and paper.
- use a flow chart for writing ideas before the student writes.
- brainstorm a word bank of possible words that would be needed prior to the writing activity.

- narrow the choice of topics
- grade on the basis of content; do not penalize for errors in mechanics and grammar.
- allow choices of manuscript, cursive, keyboarding.
- allow different positions of writing paper and/or surfaces.

Figure 49 (continued)

STRATEGIES FOR STUDENTS WITH SPECIFIC LEARNING NEEDS Considerations for Meeting Specific Learning Needs

in Skill and Instructional Areas

To ensure success with visually-impaired learners...

- describe what you are doing.
- provide preferential seating.
- provide material in large or braille print.
- give student an individual copy of visual information presented to the group
- use black-and-white printed hand outs.
- use audiotaped books.
- use tactual materials to represent concepts—contact a vision consultant to assist with the design.
- be aware of lighting requirements.
- stand away from window glare when talking to the student.
- allow extra time to complete a task.

To ensure success with hearing-impaired learners...

- provide preferential seating.
- use visual cues (overheads, drawings maps, demonstrations, visual samples of new vocabulary).
- face student directly when speaking.
- emphasize key points; don't overload with information.
- repeat or rephrase what other students say—hearing what other students say is often difficult for hearingimpaired students.

- highlight text and study quides.
- provide note-taking assistance during lectures to allow hearing-impaired student to concentrate on the teacher.
- use peer tutoring.
- use study sheets to organize information.
- pre-teach vocabulary.
- use captioned videos, films, etc.

- show videos or visuals before presenting information to provide a knowledge base for students.
- use alternative testing methods.
- minimize background noise.
- simplify vocabulary.
- use preprinted outline of materials.

To ensure success with retaining and retrieving information...

- use multi-modalities (visual, auditory, tactile) to teach the same concept.
- teach vocabulary in context.
- use cues, prompts.
- use graphic organizers.
- use frequent repetition of key points.
- break down instructional units into smaller steps.
- show relationships among concepts through graphs, outlines, and webbing.
- use color coding to show concepts and relationships.
- use peer tutors.
- highlight important information.
- teach mnemonics as a memory tool.

- teach visual imagery.
- use rhythm, music, and movement.
- use lists
- use matrix to organize information; allow students to construct some of their own.
- use pictographs

Figure 49 (continued)

STRATEGIES FOR STUDENTS WITH SPECIFIC LEARNING NEEDS

Considerations for Meeting Specific Learning Needs in Skill and Instructional Areas

To ensure success with understanding new concepts...

- pre-teach new concepts.
- identify priority learning from less important material.
- provide adequate time.
- provide meaningful practice, review, repetition
- use flow charts.
- connect previous learning to new information.
- use multiple means of learning, the same material (visual, auditory, tactile).
- have student set personal goals.
- use peer tutors.

- use multiple intelligences information to deliver material in a variety of ways.
- use cooperative learning and small groups.
- provide cues.

To ensure success with attention deficit learners...

- surround students with peers who are good role models. Encourage peer tutoring and cooperative, collaborative learning.
- maintain eye contact with students during verbal instruction.
- make directions clear and concise. Be consistent with daily instructions.
- simplify complex directions. Avoid multiple commands.
- make sure that students comprehend before beginning the task.
- repeat in a calm, positive manner, if needed.
- help students to feel more comfortable seeking assistance. (Most ADD students won't ask for help.)
- assign only one task at a time.
- monitor frequently. Use a supportive attitude.
- modify assignments as needed. Special education personnel can identify specific strengths and weaknesses of students.
- make sure you test knowledge and not attention span.
- qive extra time for certain tasks. Students with ADD may work more slowly. Don't penalize for needed extra time.
- require a daily assignment notebook if necessary. Make sure students write down all assignments each day. Parents and teachers may sign the notebook on a daily basis and use this as an additional form of communication with one another.

Adapted from the list compiled by members of CH.A.D.D. (Children with Attention Deficit Disorders) in Meeting The Special Needs of Students. Glencoe/McGraw-Hill 1997, p. 10.